

LINCWELDER[®]

250 AMP

DC MOTOR GENERATOR WELDERS

Here's the leading D.C. arc welder in its field. Commonly called the Lincoln "vertical" because of its vertically mounted shaft, this welder has been a favorite of light industry and maintenance departments for years. It gives you the highest quality in arc welding . . . welds faster and easier than other welders of its type today. Its exceptional range covers the speedy fabrication of sheet metal work, the hardsurfacing of all types of steels and the welding of heavy metal sections.

Built with rugged Lincoln industrial-type construction, the Lincwelder is famous the world over as the top performer for dependable service. It is unsurpassed for welding carbon steels, alloy and stainless steels as well as non-ferrous metals on all types of plant maintenance, hardsurfacing and production work.

SIMPLIFIES ARC WELDING

With this Lincwelder you are sure of the right arc for every job. The right *type* of arc combined with the correct arc *intensity* is instantly set on the Dual Continuous Controls. Each control is self-indicating and continuous in operation . . . gives positive, split second operation and eliminates the need for fragile meters.



Lincwelder DC-250-MK portable unit with K-722 undercarriage

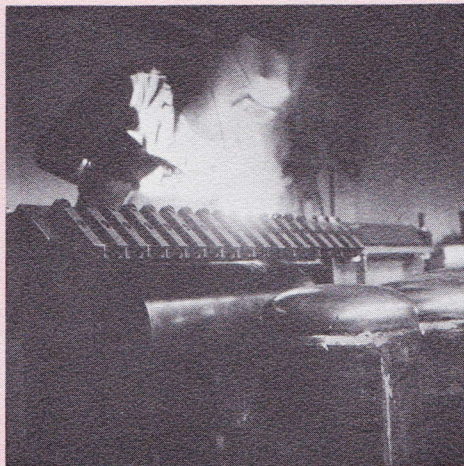
Welding currents can be increased or decreased in as fine increments as desired. Unlimited combinations of *type* of arc and arc *intensity* are available. There is no need for compromise on any setting for size and type of electrode, for penetration desired or the type of work to be done.

Accurate control of penetration, combined with greater arc stability resulting from Lincwelder's Dual Continuous Controls assures uniform, highest quality . . . welds at maximum welding speeds . . . for lowest cost arc welding.

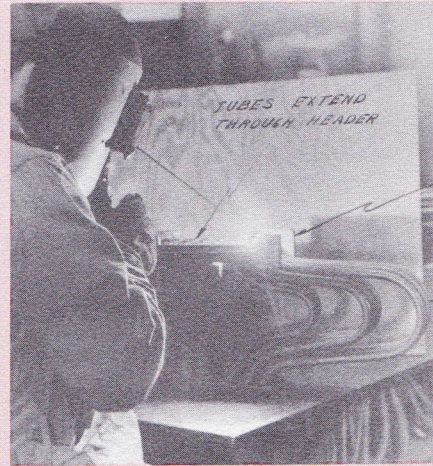
FASTER, EASIER WELDING ON ALL KINDS OF WORK



MAINTENANCE. Versatile for welding all types of steels . . . carbon, alloy and stainless as well as cast iron and all non-ferrous metals.



LIGHT GAUGE WORK. Thin gauge material is welded easily, without burn-through, as in the fabrication of these containers.



HIGH STRENGTH WELDS are assured on this aircraft unit with Lincwelder's quick set, accurate arc control.

BUILT FOR LONG, DEPENDABLE SERVICE

The Lincoln motor generator welders are of single-operator variable-voltage type with laminated pole pieces. Voltage and current controls are conveniently mounted in a horizontal position on the control panel. Complete safety in operation is assured since all control parts are contained in a steel cabinet . . . no parts carrying current (except welding terminals) are exposed. A push-button starter is mounted on the vertical front of the welder. Cable terminals are located at the rear of the welder base permitting fast and easy change of welding current polarity.

MOTOR CONSTRUCTION

Has Lincoln famous Lincweld squirrel cage induction type motor for across-the-line starting. Motor is constructed with generous copper windings to provide for overloads. Three phase motor connections are for

208-220/440, 60 cycle, or 220/380/440, 50 cycle. Special connections for other input voltages are available at a slight additional charge.

GENERAL DESCRIPTION

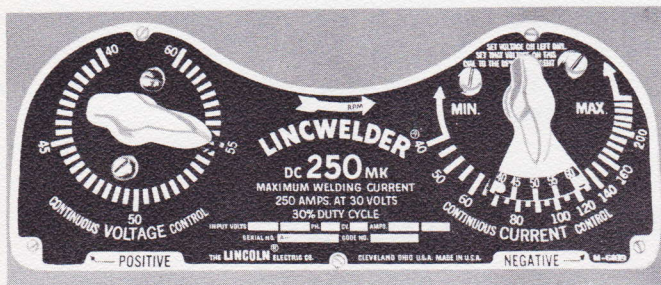
Long continuous operation is assured through Lincwelder's drip-proof construction and its welded steel design. Running gear and steering handle are provided as extra equipment if desired. A single heavy duty lifting hook is permanently welded to the welder frame to provide easy movement with a crane hook or hand lift hoist. The welder comes completely wired and ready for operation.

For simplified maintenance, motor rotor and generator are mounted on one large shaft equipped with two ball bearings of extra large size.

VERSATILE FOR A WIDE RANGE OF WORK

As shown below, Lincwelder's Dual Continuous Control varies both the *type of arc* and the *arc intensity* to suit the exact requirements of any welding job. By varying only the Continuous Voltage Control, any desired volt-ampere curve (Fig. 1) is obtained. By varying

the Continuous Current Control alone (Fig. 2) a wide range of volt-ampere curves is instantly available for any one voltage setting. Through combined settings of both voltage and current controls, an exceptionally broad and useful range becomes instantly available. (Fig. 3).



Lincwelder's Dual Continuous Control. At left is Voltage Control; at right is Current Control. Controls are set for down-hand welding with $\frac{1}{8}$ " electrode.

To obtain a forceful "digging" type of arc where the welding current must increase and decrease materially as the electrode is forced into the molten pool and withdrawn as on vertical and overhead welds, a volt-ampere current setting like "A," Fig. 3 is used. If little change in welding current is desired where the arc length is lengthened or shortened as in downhand welding, the volt-ampere setting like "B" Fig. 3 becomes desirable. Thus, within Lincwelder's broad current range, there is *no need for any compromise* to get fast, easy highest quality welding in any position to suit each operator's individual welding technique.

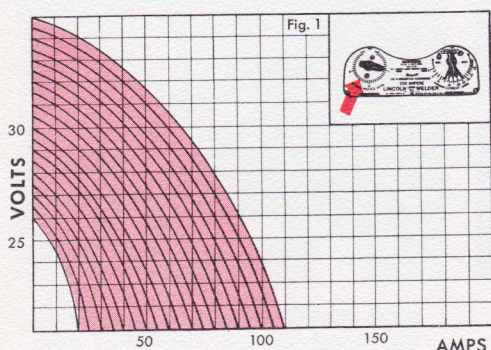


Fig. 1. The Continuous Voltage Control adjusts current as shown above.

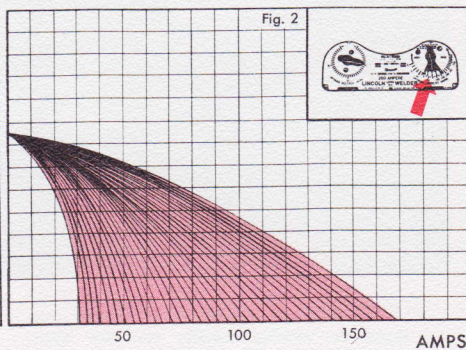


Fig. 2. The Continuous Current Control adjusts current as shown above.

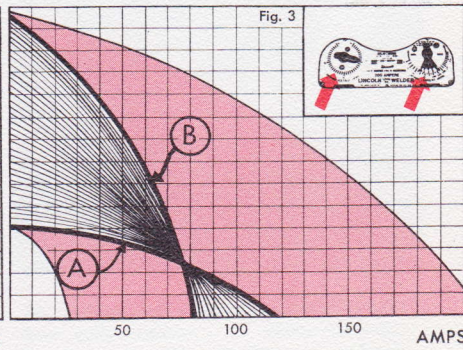


Fig. 3. Combined settings of the two controls provide a wide range of current and arc characteristics.

GENERAL DESCRIPTION (Cont.)

Overload Protection

Overload protection is provided by thermal links in the starter switch.

Lincwelder's Class B insulated armature enables it to withstand sustained operation at the upper portion of its welding range. It can thus handle the welding of materials of heavier section than would be normally possible in the class of conventional arc welders of this size and type. The Class B insulation used contains no inflammable material whatsoever. Coils are wound with

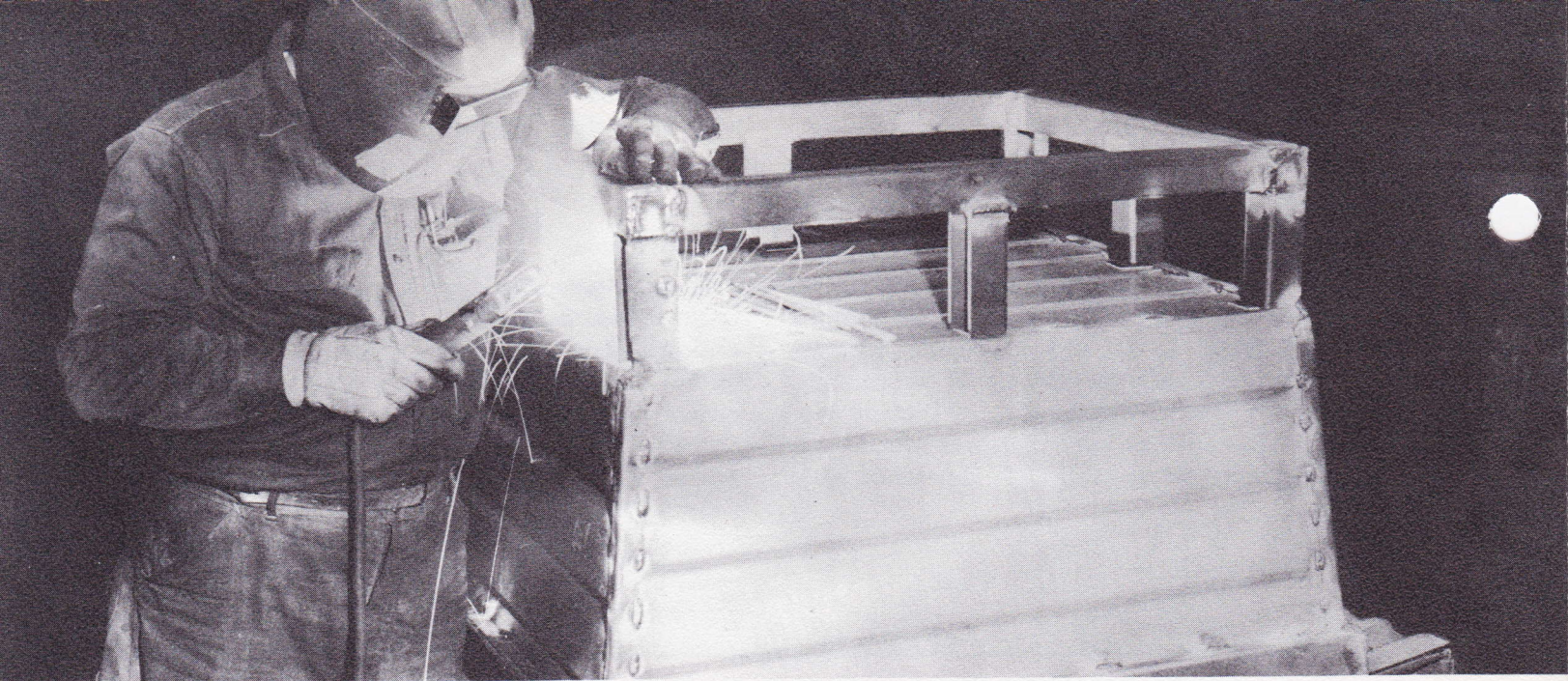
glass covered wire and securely anchored in place in mica lined slots, separately by mica dividers.

Aircraft Model

This motor-generator type welder is virtually identical to the standard model, but provides a wider range of amperage for easier welding of aircraft alloys and sheet metal . . . and for Tig welding where low current and remote control are especially desirable. Current settings as low as 10 amperes may be obtained. The Lincwelder Aircraft Welder has an outlet for plugging the Lincontrol.

SPECIFICATIONS

MODEL		DC-250-MK	DC-250-MK AIRCRAFT
TYPE	60 Cycle 50 Cycle	S-6097 S-6099	S-6098 S-9627
Current Range, amps		40-250	10-250
Rated Arc Volts		30	30
Duty Cycle			
Max. current (amps) for each given duty cycle rating:			
20%		260	260
30%		250	250
50%		200	200
100%		140	140
Operating Speed:			
60 Cycle		3600 RPM	3600 RPM
50 Cycle		3000 RPM	3000 RPM
INPUT POWER:			
Voltage:			
60 Cycle		208-220/440	208-220/440
50 Cycle		220/380/440	220/380/440
Phase		3	3
Rated Input Current (amps)			
@ 220 volts		32	32
440 volts		16	16
550 volts		12.8	12.8
WEIGHTS (Approx.) in pounds			
Net		342	340
Shipping, Domestic		359	357
Shipping, Export		424	422
Running Gear		20	20
(Additional)			
DIMENSIONS			
Size of Base		16 $\frac{7}{8}$ " x 21 $\frac{3}{4}$ "	16 $\frac{7}{8}$ " x 21 $\frac{3}{4}$ "
Height: Stationary		37 $\frac{11}{16}$ "	37 $\frac{11}{16}$ "
Portable		40 $\frac{15}{32}$ "	40 $\frac{15}{32}$ "
Mounting Bolt Holes		15 $\frac{7}{8}$ " x 20 $\frac{3}{4}$ "	15 $\frac{7}{8}$ " x 20 $\frac{3}{4}$ "
(from center to center)			



Light industry finds the Lincoln vertical welders a rugged, versatile machine. The ability to select just the right arc for each job, plus the rugged dependability of Lincwelder machines has made them extremely popular for this work.

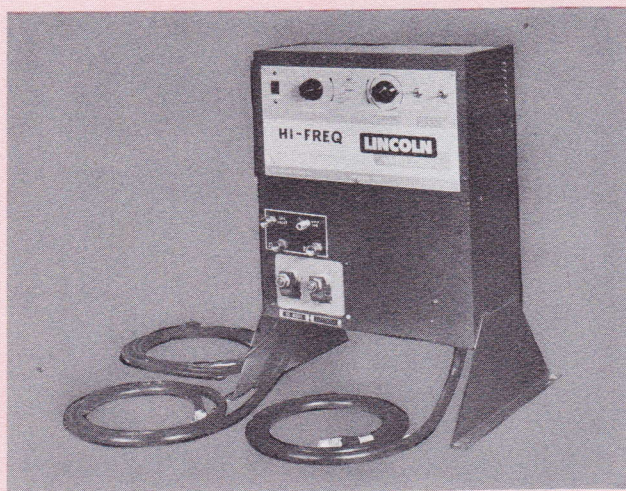
OPTIONAL EQUIPMENT

(at slight additional cost)

• Hi-Freq®

(60 cycle: K-741, 50 cycle: K-743)

Hi-Freq provides high frequency, plus complete gas and water controls for tungsten inert gas welding. Unit operates from 115 volt AC power and plugs into the welder. Equipped with standard gas and water fittings. For additional details, see bulletin 4001.2.



HI-FREQ provides high frequency, gas and water controls to Tig welding.

- Three Wheeled Running Gear with Handle (K-722)
- Standard Set of Welding Accessories

1—Ground Cable, Linconductor cable with lugs.

1—Electrode Cable, Linconductor cable with lugs.

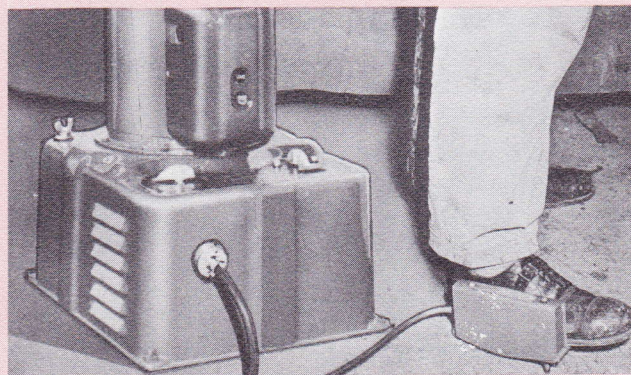
1—Lincoln Electrode Holder.

1—Lincoln Ground Clamp.

1—Head Shield complete with protective lens and non-spatter cover glass.

• Lincolntrol® (K-731)

Lincolntrol provides the utmost in convenience for remote current control. It straps to the operator's foot so both hands are free for welding. Lincolntrol is used with Aircraft models only and comes with 20 feet of cable.



LINCOLNCONTROL provides convenient remote current control for coated electrode or Tig welding with Aircraft model.

THE LINCOLN ELECTRIC COMPANY

The World's Largest Manufacturer of Arc Welding Equipment and Electrodes

CLEVELAND 17, OHIO

